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Guidelines for environmental auditing — Qualification criteria for environmental auditors

*Lignes directrices pour l'audit environnemental — Critères de qualification
pour les auditeurs environnementaux*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 14012 was prepared by Technical Committee ISO/TC 207, *Environmental management*, Subcommittee SC 2, *Environmental auditing and related environmental investigations*.

Annexes A, B and C of this International Standard are for information only.

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Introduction

To support the application of environmental management systems and environmental auditing, guidance is needed on qualification criteria for environmental auditors. The aim of this International Standard is to provide such guidance.

Internal auditors need the same set of competencies as external auditors but may not meet in all respects the detailed criteria described in this International Standard, depending upon such factors as

- the size, nature, complexity and environmental impacts of the organization;
- the rate of development of the relevant expertise and experience within the organization.

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Guidelines for environmental auditing — Qualification criteria for environmental auditors

1 Scope

This International Standard provides guidance on qualification criteria for environmental auditors and lead auditors and is applicable to both internal and external auditors. Criteria for the selection and composition of audit teams are not included, reference is made to ISO 14011 for information on these subjects.

NOTE — This International Standard has been developed in parallel with the development of International Standards on general principles of environmental auditing (ISO 14010) and on guidelines for auditing of environmental management systems (ISO 14011) specifically. It may require revision, if and when ISO develops detailed guidance on other types of environmental audits.

2 Normative reference

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International standards.

ISO 14001:1996, *Environmental management systems — Specification with guidance for use*.

ISO 14010:1996, *Guidelines for environmental auditing — General principles*.

ISO 14011:1996, *Guidelines for environmental auditing — Audit procedures — Auditing of environmental management systems*.

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 14010 and ISO 14011 apply, together with the following.

NOTE — Terms and definitions in the field of environmental management are given in ISO 14050.

3.1

environmental auditor

person qualified to perform environmental audits

3.2

lead environmental auditor

person qualified to manage and perform environmental audits

3.3

degree

recognized national or international degree, or equivalent qualification, normally obtained after secondary education, through a minimum of three years formal full-time, or equivalent part-time, study

3.4

secondary education

that part of the national educational system that comes after the primary or elementary stage, but that is completed immediately prior to entrance to a university or similar establishment

4 Education and work experience

Auditors should have completed at least secondary education, or equivalent.

Auditors should have appropriate work experience, which contributes to the development of skills and understanding in some or all of the following:

- a) environmental science and technology;
- b) technical and environmental aspects of facility operations;
- c) relevant requirements of environmental laws, regulations and related documents;
- d) environmental management systems and standards against which audits may be conducted;
- e) audit procedures, processes and techniques.

Auditors who have completed only secondary education or equivalent should have a minimum of five years of appropriate work experience. This criterion may be reduced by satisfactory completion of formal post-secondary full-time or part-time education, the contents of which address some or all of the topics listed in items a) to e). Any reduction should not exceed the total period of such education addressing those topics, and the total reduction should not exceed one year.

Auditors who have obtained a degree should have a minimum of four years appropriate work experience. This criterion may be reduced by satisfactory completion of formal post-secondary full-time or part-time education, the contents of which address some or all of the topics listed in items a) to e). Any reduction should not exceed the total period of such education addressing those topics, and the total reduction should not exceed two years.

5 Auditor training

In addition to the criteria described in clause 4, auditors should have completed both formal training and on-the-job training, to develop competence in carrying out environmental audits. Such training may be provided by the auditor's own organization, or by an external organization.

Competence achieved through training should be demonstrated by suitable means, examples of which are given in annex A.

5.1 Formal training

Formal training should address

- a) environmental science and technology;
- b) technical and environmental aspects of facility operations;

- c) relevant requirements of environmental laws, regulations and related documents;
- d) environmental management systems and standards against which audits may be conducted;
- e) audit procedures, processes and techniques.

The criterion for formal training in some or all of these areas may be waived if competence can be demonstrated through accredited examinations or relevant professional qualifications.

5.2 On-the-job training

An auditor should have completed on-the-job training for a total of twenty equivalent workdays of environmental auditing, and for a minimum of four environmental audits. This should include involvement in the entire audit process under the supervision and guidance of the lead auditor. This on-the-job training should occur within a period of not more than three consecutive years.

6 Objective evidence of education, experience and training

Individuals should keep objective evidence of their education, experience and training.

7 Personal attributes and skills

Auditors should possess personal attributes and skills that include, but are not limited to, the following:

- a) competence in clearly expressing concepts and ideas, orally and in writing;
- b) interpersonal skills conducive to the effective and efficient performance of the audit, such as diplomacy, tact and the ability to listen;
- c) the ability to maintain independence and objectivity sufficient to permit the accomplishment of auditor responsibilities;
- d) skills of personal organization necessary to the effective and efficient performance of the audit;
- e) the ability to reach sound judgements based on objective evidence;
- f) the ability to react with sensitivity to the conventions and culture of the country or region in which the audit is performed.

8 Lead auditor

The lead auditor should be an auditor who shows a thorough understanding and application of those personal attributes and skills necessary to ensure effective and efficient management and leadership of the audit process, and who meets either of the following additional criteria.

Either

- Participation in the entire audit process for a total of fifteen additional equivalent workdays of environmental auditing, for a minimum of three additional complete environmental audits; and
- participation as acting lead auditor, under the supervision and guidance of a lead auditor, for at least one of these three audits.

Or

- Demonstration of those attributes and skills to the audit programme management or others, by means such as interviews, observation, references and/or assessments of environmental auditing performance made under quality assurance programmes.

These additional criteria for the lead auditor should be met within a period of not more than three consecutive years.

9 Maintenance of competence

Auditors should maintain their competence by ensuring the currency of their knowledge of

- a) aspects of relevant environmental science and technology;
- b) appropriate technical and environmental aspects of facility operations;
- c) relevant requirements of environmental laws, regulations and related documents;
- d) environmental management systems and related standards against which audits may be conducted;
- e) audit procedures, processes and techniques.

They should ensure that their experience in the execution of audits is current, and should participate in refresher training as necessary.

10 Due professional care

Auditors should exercise due professional care, as addressed in ISO 14010, and adhere to an appropriate code of ethics.

11 Language

No auditor should participate unsupported in an audit when unable to communicate effectively in the language necessary for performing his or her responsibilities. When necessary, support should be obtained from a person with the necessary language skills, who is not subject to pressures that could affect the conduct of the audit.

Annex A

(informative)

Evaluating the qualifications of environmental auditors

A.1 General

This annex provides guidance for evaluating the qualifications of environmental auditors as defined in this International Standard.

A.2 Evaluation process

This International Standard may be implemented by the establishment and operation of an evaluation process. The process may be internal or external to the auditor's audit programme management. Its purpose is to evaluate the qualifications of environmental auditors.

This process should be directed by an individual or individuals having current understanding and experience of auditing operations.

The process for evaluating the environmental auditor may be subject to a quality assurance programme.

A.3 Evaluations of education, work experience, training and personal attributes

There should be evidence to show that environmental auditors have acquired and maintained the necessary education, work experience, training and personal attributes described in this International Standard. The evaluation process should include some of the following methods:

- a) interviews with candidates;
- b) written and/or oral assessment or other suitable means;
- c) review of candidates' written work;
- d) discussions with former employers, colleagues, etc.;
- e) role playing;
- f) peer observation under actual audit conditions;
- g) reviewing records of education, experience and training as defined in this International Standard;
- h) consideration of professional certifications and qualifications.

Annex B

(informative)

Environmental auditor registration body

B.1 General

This annex contains guidance on the development of a body to ensure a consistent approach to the registration of environmental auditors.

The body may act to register environmental auditors directly or accredit other organisations who in turn register environmental auditors according to the criteria contained in this International Standard.

B.2 Auditor registration

If it is appropriate to establish a body for ensuring that environmental auditors are registered in a consistent manner, such a body should be independent and the following guidelines should apply.

The body should establish an evaluation process consistent with that contained in annex A. The process should be subject to a quality assurance programme.

The body should keep a register of environmental auditors who currently meet the criteria specified in this International Standard.

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